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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,628	07/26/2001	Bryan M. Willman	2721	6471

7590 06/27/2005

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TANG, KENNETH	
ART UNIT	**PAPER NUMBER**
2195	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,628	WILLMAN, BRYAN M.	
	Examiner	Art Unit	
	Kenneth Tang	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-77* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/22/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This final action is in response to the Remarks filed on 3/21/05. Applicant's arguments have been fully considered but were not found to be persuasive.

2. Claims 1-77 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a. In claim 1, "a map" in line 5 is indefinite because it is not made explicitly clear in the claim language whether or not this is the same thing as "a first memory map" (3-4).

b. In claim 31, it is unclear whether the claims are independent or dependent claims. As is, computer-readable medium claims should not depend from computer-system claims. Claim 31 is required to be put into independent form.

c. Claim 32 recites the limitations "the thread " in lines 3 and 13. There is insufficient antecedent basis for this limitation in the claim. It is also unclear whether "the thread" is only singular or could be plural by having at least one thread.

d. In claim 64, "first and second address maps" is indefinite because it is not made explicitly clear in the claim language whether or not this is the same thing as a "first and second memory map";

e. In claim 64, "changing the first address map to the second address map" (lines 20-21) is indefinite because it is unclear whether addresses or maps are being changed. In addition, it is unclear whether or not the first and address is a virtual address and physical address.

f. In claim 69, it is unclear whether the claims are independent or dependent claims. As is, computer-readable medium claims should not depend from computer method claims. Claim 69 is required to be put into independent form.

g. In claim 76, "each of the maps" (line 11) is indefinite because it is not made explicitly clear whether there are 2 or 3 maps that are being mapped. In addition, there is a lack of antecedent basis for "the maps". Claim 70 introduces a first memory map and a second memory map. Claim 76 needs to amend the maps to be the first memory map and the second memory map, for example.

h. In claim 77, it is unclear whether the claims are independent or dependent claims. As is, computer-executable instructions claims should not depend from computer method claims. Claim 77 is required to be put into independent form.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5, 7-34, and 36-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magee et al. (hereinafter Magee) (US 5,729,710) in view of Williams (US 6,304,973 B1).

5. As to claim 1, Magee teaches in a computer-system, a method comprising:

receiving a request via a process thread having a first memory map associated therewith *(col. 18, lines 28-44)*;

Magee also teaches various privilege levels with maps *(col. 15, lines 10-34, col. 18, lines 43-44, col. 9, lines 40-56, col. 33, lines53-61)*. Magee fails to explicitly teach changing maps, performing the map change to associate a second memory map with the process thread, the second memory map providing different memory access with respect to the first memory map; and restoring the privilege level to a level that does not allow a map change. However, Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems *(col. 26, lines 18-26)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of teach changing maps, performing the map change to associate a second memory map with the process thread, the second memory map providing different memory access with respect to the first memory map; and restoring the privilege level to a level that does not allow a map change to the existing system of Magee in order to increase the security and integrity of the system *(col. 26, lines 18-26)*.

6. As to claim 2, Magee teaches wherein receiving a request comprises receiving an application programming interface call at an operating system component *(col. 7, lines 11-22)*.

7. As to claim 3, Magee teaches wherein receiving a request comprises, receiving an operating system a call from a kernel mode component *(col. 21, lines 63-67)*.

8. As to claim 4, Magee teaches wherein the kernel mode component comprises an installable driver *(col. 6, lines 64-67)*.

9. As to claim 5, Magee teaches wherein changing a privilege level comprises calling a call gate *(col. 67, table 14)*.

10. As to claim 7, Magee teaches wherein performing the map change comprises writing a register *(col. 3, lines 11-13)*.

11. As to claim 8, Magee teaches wherein the second memory map accesses protected memory, and further comprising, executing trusted code while the second memory map is associated with the process thread *(col. 9, lines 63-67 through col. 10, lines 1-6, col. 14, lines 53-63)*.

12. As to claim 9, Magee teaches performing a second map change to re-associate the first map with the process thread *(col. 4, lines 64-67 through col. 5, lines 1-25)*.

13. As to claim 10, Magee teaches wherein executing trusted code includes entering function predefined entry point *(col. 14, lines 53-63, col. 3, lines 29-31)*.

14. As to claim 11, Magee teaches wherein entering the function comprises making an application programming interface call *(col. 7, lines 11-22)*.

15. As to claim 12, Magee teaches wherein the function allocates memory *(col. 17, line 60)*.

16. As to claim 13, Magee teaches wherein the function deallocates memory *(col. 17, line 60)*.

17. As to claim 14, Magee teaches wherein the function allocates an object *(col. 17, line 60)*.

18. As to claim 15, Magee teaches wherein the object comprises a handle *(col. 30, line 37)*.

19. As to claim 16, Magee teaches wherein the object comprises a synchronization objects *(col. 39, lines 17-58)*.

20. As to claim 17, Magee teaches wherein the object comprises a process *(col. 1, lines 34-37)*.

21. As to claim 18, Magee teaches wherein the object comprises threads *(col. 10, lines 54-67)*.

22. As to claim 19, Magee teaches wherein the function performs a trust-privileged operation *(col. 14, lines 53-67)*.

23. As to claim 20, Magee teaches wherein the trust-privileged operation comprises signaling a synchronization object *(col. 39, lines 17-58)*.

24. As to claim 21, Magee teaches wherein the trust-privileged operation comprises deleting a timer *(col. 19, lines 50-51, col. 13, lines 23-43)*.

25. As to claim 22, Magee teaches wherein the trust-privileged operation comprises closing a handle *(col. 30, line 37)*.

26. As to claim 23, Magee fails to explicitly teach wherein the first and second memory maps each include a mapping that maps virtual memory address to a physical memory address that is larger than the largest possible virtual memory address that an entity is allowed to address. However, this is obvious to one of ordinary skill in the art because a memory location larger than the largest possible virtual memory address is needed because there is no longer room in the virtual memory addresses.

27. As to claim 24, Magee teaches wherein the virtual memory address that maps to a physical memory address that is larger is in user mode addressable space *(col. 9, lines 40-56)*.

28. As to claim 25, Magee teaches wherein the first and second memory maps each include a mapping that maps a virtual memory address to a physical memory address the same *(col. 3, lines 1-14)*.

29. As to claim 26, Magee teaches wherein the physical memory address that is the same in kernel mode addressable space *(col. 22, lines 51-57)*.

30. As to claim 27, it is rejected for the same reasons as stated in the rejections of claims 24-26.

31. As to claim 28, Magee teaches wherein the first and second memory maps each map a virtual memory address to a physical memory address that is common to both maps *(col. 3, lines 1-14)*.

32. As to claim 29, Magee teaches wherein the second map maps memory that is invalid in the first map *(col. 61, Table 8 and col. 63, table 11, and col. 47, lines 14-20)*.

33. As to claim 30, Magee teaches wherein the second map maps to has different access rights the first map *(col. 18, lines 29-44, col. 47, lines 14-20)*.

34. As to claim 31, it is rejected for the same reasons as stated in the rejections of claim 1.

35. As to claim 32, Magee teaches in a computing device: a system comprising:

a process having least one thread *(col. 20, lines 53-56, col. 3, lines 1-14)*;

a first memory map associated with the thread and having data therein that maps virtual memory addresses to physical memory *(col. 9, lines 40-56)*;

a second memory map having data therein that maps virtual memory addresses physical memory, the second memory map providing different memory access with respect to the first memory map *(col. 9, lines 40-56 and col. 18, lines 43-44)*;

a protection mechanism, the protection mechanism configured to allow changing of a map *(col. 33, lines 55-60, col. 15, lines 10-34, col. 18, lines 28-44)*; and

Magee teaches having a trusted server *(col. 24, lines 6-14)* but fails to explicitly teach trusted code configured invoke the protection mechanism to change the thread from being associated with the first map to be being associated with the second map. However, Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems *(col. 26, lines 18-26)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of switching to trusted and non-trusted mappings to the existing system of Magee in order to increase the security and integrity of the system *(col. 26, lines 18-26)*.

36. As to claim 33, Magee teaches wherein the second memory map has more access rights to virtual memory addresses than the first memory map *(col. 14, lines 53-63, col. 15, lines 10-33)*.

37. As to claim 34, Magee teaches wherein protection mechanism comprises a call gate configured to change privilege levels *(col. 67, table 14)*.

38. As to claim 36, Magee teaches wherein the trusted code further includes a function *(col. 2, lines 48-50)*.

39. As to claim 37, Magee teaches wherein the function allocates memory to the process *(col. 17, line 60)*.

40. As to claim 38, Magee teaches wherein the function deallocates memory *(col. 17, line 60)*.

41. As to claim 39, Magee teaches wherein the function allocates an object *(col. 17, line 60)*.

42. As to claim 40, Magee teaches wherein the object comprises handle *(col. 30, line 37)*.

43. As to claim 41, Magee teaches wherein the object comprises synchronization objects *(col. 39, lines 17-58)*.

44. As to claim 42, Magee teaches wherein the object comprises a process *(col. 1, lines 34-37)*.

45. As to claim 43, Magee teaches wherein the object comprises a threads *(col. 10, lines 54-67)*.

46. As to claim 44, Magee teaches wherein the function performs a trust-privileged operation *(col. 14, lines 53-67)*.

47. As to claim 45, Magee teaches wherein the trust-privileged operation comprises signaling a synchronization object *(col. 39, lines 17-58)*.

48. As to claim 46, Magee teaches wherein the trust-privileged operation comprises deleting a timer *(col. 19, lines 50-51, col. 13, lines 23-43)*.

49. As to claim 47, Magee teaches wherein the trust-privileged comprises closing a handle *(col. 30, line 37)*.

50. As to claim 48, Magee teaches wherein only the trusted code is executed while the second memory map is in use *(col. 9, lines 63-67 through col. 10, lines 1-6, col. 14, lines 53-63)*.

51. As to claim 49, Magee teaches wherein the trusted code executes in response to from the process *(col. 21, lines 63-67)*.

52. As to claim 50, Magee teaches wherein the trusted code comprises an operating system component, and wherein the trusted code executes in response to an application interface call from the process an operating programming system component *(col. 7, lines 11-22)*.

53. As to claim 51, Magee teaches wherein the protection mechanism comprises a call gate *(col. 67, table 14)*.

54. As to claim 52, Magee teaches wherein the trusted code changes the thread from being associated with the first map to be being associated with the second map by writing to a register *(col. 3, lines 11-13)*.

55. As to claim 53, Magee teaches wherein the trusted code changes the thread from being associated with the first map be being associated with the second map by instructing a hardware component to select a different subset a translation look-aside buffer *(col. 4, lines 64-67 through col. 5, lines 1-25)*.

56. As to claim 54, Magee teaches wherein the trusted code performs a second map change to re-associate the first map with the process thread, to not allow map changing *(col. 33, lines 55-60)*.

57. As to claim 55, Magee teaches wherein the protection mechanism changes a privilege level (changing rights) to not allow map changing *(col. 24, lines 56-59, col. 33, lines 55-60)*.

58. As to claim 56, Magee fails to explicitly teach wherein the first and second memory maps each include a mapping that maps a virtual memory address to a physical memory address that is larger than the largest possible virtual memory address that an entity is allowed to specify. However, this is obvious to one of ordinary skill in the art because a memory location larger than the largest possible virtual memory address is needed because there is no longer room in the virtual memory addresses.

59. As to claim 57, Magee teaches wherein the virtual memory address that maps to a physical memory address larger is in user mode addressable space *(col. 9, lines 40-56)*.

60. As to claim 58, Magee teaches wherein the first and second memory maps each include a mapping maps a virtual memory address to a physical memory address that is the same *(col. 3, lines 1-14)*.

61. As to claim 59, Magee teaches wherein the physical memory address that is the same is in kernel mode addressable space *(col. 22, lines 51-57)*.

62. As to claim 60, Magee teaches wherein the first and second memory maps each map a virtual memory address to a physical memory address that is common to both maps *(col. 3, lines 1-14)*.

63. As to claim 61, Magee teaches wherein the second map maps to memory that is invalid in the first map *(col. 61, Table 8 and col. 63, table 11, and col. 47, lines 14-20)*.

64. As to claim 62, Magee teaches wherein the second map maps to memory that has different access rights in the first map *(col. 18, lines 29-44, col. 47, lines 14-20)*.

65. As to claim 63, fails to explicitly teach teaches wherein the second map shares a mapping of some virtual addresses to physical addresses common to the first map, and includes another mapping of virtual addresses to the physical addresses that are not common to the first map. However, Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems *(col. 26, lines 18-26)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of switching to the second map prior to running a first set of untrusted code without switching process and returning to the first map after completion of the untrusted code to the existing system of Magee in order to increase the security and integrity of the system *(col. 26, lines 18-26)*.

66. As to claim 64, Magee teaches a computer-implemented method, comprising:

associating first and second address maps with a process *(col. 9, lines 40-56, col. 18, lines 43-44)*;

receiving a request from a thread process change from the first address map to the second address map *(col. 37, lines 40-67, col. 18, lines 28-44)*;

67. Magee fails to explicitly teach changing the first address map to the second address map. However, Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems *(col. 26, lines 18-26)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of switching to the second map prior to running a first set of untrusted code without switching process and returning to the first map after completion of the untrusted code to the existing system of Magee in order to increase the security and integrity of the system *(col. 26, lines 18-26)*. Magee also fails to explicitly teach using the mapping to access data at a physical memory location having a physical address that is larger than the largest possible virtual memory address. However, this is obvious to one of ordinary skill in the art because a memory location larger than the largest possible virtual memory address is needed because there is no longer room in the virtual memory addresses.

68. As to claim 65, Magee teaches wherein the first and second memory maps each map a virtual memory address to a physical memory address that is the same *(col. 3, lines 1-14)*.

69. As to claim 66, Magee teaches wherein each virtual memory address that maps a physical memory address that is larger is user mode addressable space, and wherein the physical memory address that is the same kernel mode addressable space *(col. 22, lines 51-57)*.

70. As to claim 67, Magee fails to explicitly teach having a third map but it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a third map to the system because it would provide for different privileges for security.

71. As to claim 68, Magee teaches wherein changing the first map the second map includes calling the operating system to switch the maps *(col. 21, lines 63-67)*.

72. As to claim 69, it is rejected for the same reasons as stated in the rejection of claim 64.

73. As to claim 70, Magee teaches a computer-implemented method, comprising:

associating first and second memory maps with a process, wherein the second memory map provides different memory access with respect to the first memory map *(col. 9, lines 40-56, col. 18, lines 43-44)*;

running trusted code with the first memory map *(col. 24, lines 6-14)*;

74. Magee fails to explicitly teach switching to the second memory map prior to running a first set of untrusted code without switching process and returning to the first memory map after completion of the untrusted code. However, Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems *(col. 26, lines 18-26)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of switching to the second memory map prior to running a first set of untrusted code without switching process and returning to the first memory map after completion of the

untrusted code to the existing system of Magee in order to increase the security and integrity of the system *(col. 26, lines 18-26)*.

75. As to claim 71, Magee teaches wherein switching to the second map includes calling the operating system to switch the maps *(col. 21, lines 63-67)*.

76. As to claim 72, Magee teaches wherein the first and second maps map to at least one physical address that is the same *(col. 3, lines 1-14)*.

77. As to claim 73, Magee teaches further comprising switching to a third map prior to running a second set of untrusted code without switching the process *(col. 3, lines 1-14)*. Magee fails to explicitly teach having a third map but it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a third map to the system because it would provide for different privileges for security.

78. As to claim 74, it is rejected for the same reasons as stated in the rejection of claim 73. In addition, Magee teaches mapping to at least one physical address that is the same *(col. 3, lines 1-14)*.

79. As to claim 75, it is rejected for the same reasons as stated in the rejection of claim 73. In addition, Magee teaches mapping to at least one physical address that is the same *(col. 3, lines 1-14)*.

80. As to claim 76, Magee teaches wherein each of the maps map to at least one physical address that is the same *(col. 3, lines 1-14)*.

81. As to claim 77, it is rejected for the same reasons as stated in the rejection of claim 70.

82. Claims 6 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magee et al. (hereinafter Magee) (US 5,729,710) in view of Williams (US 6,304,973 B1), and further in view of Gulsen (US 5,727,211).

83. As to claim 6, Magee and Williams fails to explicitly teach wherein changing a privilege level comprises changing to a ring 0 privilege level. However, Gulsen teaches using a ring 0 level *(col. 6, lines 23-36 and 47-55)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of a ring 0 level to the existing system because this provides a protection layer *(col. 6, lines 23-36 and 47-55)*.

84. As to claim 35, Magee and Williams fails to explicitly teach wherein the trusted code includes a thunk configured to re-vector directed to one set of code to another set of code. However, Gulsen teaches thunking to be a standard process by which 16-bit 80x86 code modifies certain process calling sequences to allow it call 32-bit code *(col. 4, lines 56-60)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

combine the feature of thunking to the existing system because it would allow reconstructing part of data structures for parameter passing and return *(col. 4, lines 56-60)*.

Response to Arguments

85. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

86. Applicant argues on pages 17-18 of the Remarks that claims 31, 69, and 77 do not need to be put in independent form.

In response, the Examiner respectfully disagrees. Claim 31, 69, and 77 are computer-readable medium claims, while their respective independent claims 1, 64, and 70 are method claims.

87. Applicant argues on page 18 of the Remarks that the phrase "a map" is used in the claim language to modify the word "change" immediately following the phrase "a map" thereby resulting in the phrase "a map change." The context of the phrase "a map change" in claim 1 is that a privilege level is changed to allow "a map change" to occur. Hence, the phrase "a map" in line 5 of claim 1 is not indefinite.

In response, the Examiner respectfully disagrees. The Applicant misses the point of the rejection made by the Examiner. It is not made explicitly clear whether a map change is

supposed to be a memory map change. The Applicant does not equate whether or not a map as being the same thing as a memory map. There is no relationship or connection established in the claim language between the two or with anything else. The 35 USC 112, 2nd paragraph rejection stands.

88. Applicant argues on page 19 of the Remarks that there is sufficient antecedent basis for claim 32. Applicant submits that by introducing "the thread" with the modifier of "at least one" that one or more threads are claimed in the system.

In response, the Examiner respectfully disagrees. It is unclear which of the at least one thread that "the thread" is referring to. To overcome the antecedent basis issue, the claim would have to be amended to change "the thread" to be "the at least one thread".

89. Applicant argues on page 19 of the Remarks that claim 64 is not indefinite because the "first and second memory map" is not used in independent claim 64 nor in any claims that depend therefrom.

In response, the Examiner respectfully disagrees. In "the first and second memory map" is found in claim 65, which depends on claim 64. There is a lack of antecedent basis because this was not introduced in claim 64. That is why it was unclear whether the "first and second address maps" relates to the "first and second memory map".

90. Applicant is unclear whether or not the first and second address is a virtual address and physical address and requests that the Examiner clarify.

It is unclear whether this is a virtual or physical address because in claim 65 (depends on claim 64), there is a first and second memory map relate to a physical and virtual memory address. What makes it unclear is that claim 65 states a first and second memory map but its independent claim does not introduce a first and second memory map but rather a first and second address maps.

91. Applicant argues on page 21 of the Remarks that claim 76 is not indefinite.

In response, the Examiner respectfully disagrees. It is indefinite because claim 76 refers to maps and there is an antecedent basis problem. Claim 70 (the independent claim) introduces a first memory map and a second memory map. It is unclear whether a new map is introduced or if this refers to the memory map. No connection or relationship is made in the claims.

92. Applicant argues on pages 23 of the Remarks that Williams does not deal with changing a privilege level to a level that allows a map change responsive to a request via a process thread associated with a first memory map, performing the map change to associate a second memory map with the process thread, and restoring the privilege level to a level that does not allow a map change.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

93. Applicant argues on page 24 of the Remarks that Williams does not disclose, suggest, or remotely hint at responding to a request via a process thread associated with a first memory map to change a privilege level to a level that allows a map change as claimed.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

94. Applicant argues on pages 24-25 of the Remarks that Williams does not disclose, suggest, or remotely hint at performing the map change to associate a second memory map (providing different memory access with respect to the first memory map) with the process thread and restoring the privilege level to a level that does not allow a map change. Williams teaches away from that.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., defining the map change to be providing different memory access with respect to the first memory map) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Williams teaches mapping and switching back and forth between separate trusted and non-trusted systems (col. 26, lines 18-26) and this satisfies the broadest reasonable interpretation of the claim language. Williams does not teach away from this limitation. In order for Williams to teach away, it has to teach that it is not possible for performing the map change to associate a second memory map (providing different memory access with respect to the first memory map) with the process thread and restoring the privilege level to a level that does not allow a map change. Williams does not show that and the

Applicant does not provide proper support for that. The map change in Williams is the changing from a trusted to non-trusted system.

95. Applicant argues on page 27 of the Remarks that Williams does not perform a map change to associate a second memory map with a process thread whereby the second memory map provides different memory access with respect to a first memory map that is associated with the process thread. Nor does Williams restore the privilege level to a level that does not allow a map change.

In response, the Examiner respectfully disagrees. Williams teaches a map change to associate a second memory map by switching back and forth between a trusted and non-trusted system. It is inherent that there is a process or a thread to perform this particular feature. Both Williams and Magee teaches using thread processing. In Williams, two examples satisfy the broadest reasonable interpretation of privilege levels: trusted and non-trusted. Only trusted access will allow a map change *(col. 16, lines 60-67, etc.)*. Non-trusted access will not allow it.

96. Applicant argues on pages 27-28 that the Office action does not provide a proper motivation for combining Magee with the subject matter discussed in Williams. Applicant argues that the motivation statement does not come close to adequately addressing the issue of motivation to combine.

In response, the Examiner respectfully disagrees. Williams and Magee are both in the same field of endeavor of computer processing and memory mapping, therefore, one of ordinary skill in the art of computer processing and memory mapping would have been able to combine the teachings of the two references.

97. Applicant argues on page 28 that the motivation statement is supported by the Applicant's disclosure and the references and that such hindsight reconstruction is not permissible.

In response, the Examiner respectfully disagrees. The support for the motivation is found in Williams on col. 26, lines 18-26. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

98. Applicant argues that Williams and Magee fail to teach a method for code and thread differential addressing via multiplex page maps.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a method for code and thread differential addressing via multiplex page maps) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
6/18/05

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